

U.S. Patent Application Serial No. **10/541,308**
Response filed February 27, 2009
Reply to OA dated November 3, 2008

REMARKS

Claims 1, 2, 5, 6, 9-11, 14, 15 and 18-27 are pending in this application. No amendment is made in this Response. It is believed that this Response is fully responsive to the Office Action dated November 3, 2008.

Claims 1, 2, 5, 6, 9 and 22-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP 06-041609 in view of Svilar et al. (US 4,731,118) as stated in the Office action dated May 14, 2008. (Office action paragraph no. 3)

The rejection of claims 1, 2, 5, 6, 9 and 22-24 is respectfully traversed, and reconsideration is requested.

In the Response of August 14, 2008, Applicant had traversed the rejection, arguing that JP '609 uses "electrolytic copper," that is, pure copper, and there is no disclosure of use of a copper alloy. Applicant argued that there is no motivation to substitute Svilar's alloy for the electrolytic copper in JP '609.

The Examiner provides a Response to Arguments in paragraph no. 4 on page 3 of the Office action. The Examiner states that: "the ground of rejection of the claimed method relies on the teaching of JP ('609) rather than Svilar ('118). Svilar is only relied upon for the teaching of the copper alloy."

The Examiner argues that: "the function of the infiltrant of Svilar et al. ('118) would be similar to that of the alloying powder of JP ('609) in terms of making a ferrous sintered alloy with desired properties."

The Examiner further states:

"It is further noted that Svilar et al. ('118) discloses that the ferrous powder metal can be infiltrated by either a copper or copper alloy infiltrant (col. 4, lines 6-20), suggesting that either pure copper or a copper alloy can be used as the infiltrant to improve the properties of the ferrous powder metal parts as desired."

In response, Applicant submits that this latter argument only provides a motivation for use of copper alloy **in the Svilar '118 reference, but not in JP '109**. However, the stated rejection is based on substitution of the copper alloy of Svilar '118 for the electrolytic copper in JP '109. The Examiner has provided no clear motivation for such a substitution.

The Examiner may be implying (in stating, "the function of the infiltrant of Svilar ('118) would be similar to that of the alloying powder in JP ('609) ...") that the purpose of the copper alloy in Svilar '118 is the same as in JP '109. However, Applicant clearly argued in the Response dated August 14, 2008, that **this is not the case**: the purposes of the electrolytic copper in JP '609 and the copper alloy in Svilar '118 are quite different. The Examiner **does not appear to have provided any rebuttal** to those arguments.

In particular, Applicant notes that the Examiner refers to Svilar as disclosing "that the ferrous metal powder can be **infiltrated**" (emphasis added). Svilar specifically uses the term "infiltrated," and Applicant has pointed out that this refers to **infiltrating a sintered steel**, which is totally different from **forming a copper alloy** with Fe powder and graphite powder, as in JP '609. The processes in the two references are clearly different, and the structure/composition associated with infiltrating a sintered steel in Svilar would be expected by one of skill in the art to be quite different from that of the copper in the alloy in JP '609.

U.S. Patent Application Serial No. 10/541,308
Response filed April 4, 2006
Reply to OA dated November 3, 2008

Applicant therefore maintains the previously presented argument, which Applicant reiterates here:

JP '609 discloses mixing iron, graphite and Cu powder into a green compact, and sintering the compact. JP '609 explicitly uses "electrolytic copper," that is, pure copper (paragraph [0011]). The purpose in JP '609 is to make a sintered member in the Fe-Cu-C system (paragraph [0003]).

Svilar '118 is cited for disclosing a prealloyed copper having iron, manganese, silicon and other elements, at column 6, lines 27-30, and the Examiner substitutes this for the electrolytic copper of JP '109. However, Svilar's prealloyed copper is specifically in the form of an "infiltrant slug" (column 6, line 27), and its purpose is to **infiltrate** a carbon steel, which is then sintered, austenitized and quenched. This is a completely different process than in JP '609, and does not result in a structure like that resulting in JP '609.

Therefore, the purpose of the copper alloy in Svilar '118 is quite different from that of the electrolytic copper in JP '190. There would be no motivation to one of skill in the art to use the "infiltrant" of Svilar as the source of pure copper in JP '190. Moreover, the teaching of JP '190 to use "**electrolytic**" copper is clear, and this use of pure copper teaches away from the use of a copper alloy.

Claims 1, 2, 5, 6, 9 and 22-24 are therefore not obvious over JP 06-041609 and Svilar et al. (US 4,731,118), taken separately or in combination.


U.S. Patent Application Serial No. **10/541,308**
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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosure: Petition for Extension of Time

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